

# EUROPEAN PATENT OFFICE

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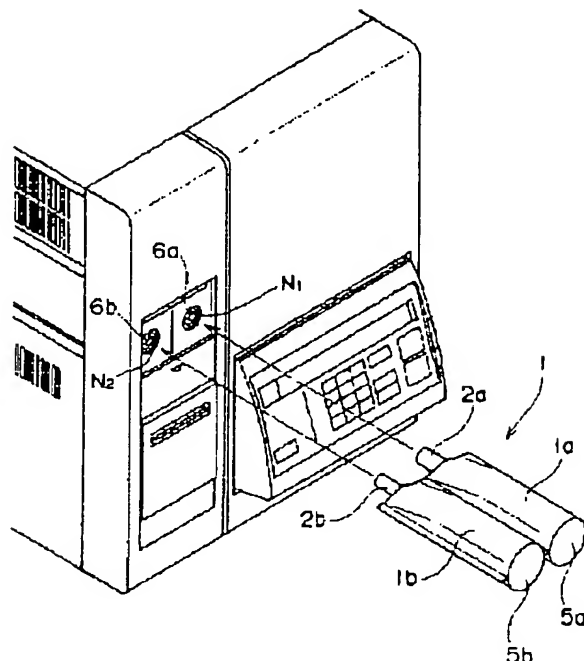
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APPLICATION NUMBER : 08009545

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TITLE : EXHALATION BAG AND GAS  
MEASURING DEVICE



ABSTRACT : PROBLEM TO BE SOLVED: To certainly prevent the mistake of exhalation by providing a plurality of exhalation-accumulation chambers wherein containers are mutually connected and an exhalation introducing pipe having a shape prevented from being attached to the introducing ports of a gas measuring device by mistake.

SOLUTION: The exhalation bag 1 has integrally formed exhalation collecting chambers 1a, 1b collecting the exhalation of a patient before and after a urea diagnostic drug is administered. A pipe 2a is connected to the leading end of the collecting chamber 1a and a pipe 2b is connected to the leading end of the collecting chamber 1b. The pipes 2a, 2b have the functions of exhalation blow ports blowing exhalation into the collecting chambers 1a, 1b and the functions set to the nozzles N<sub>1</sub>, N<sub>2</sub> of an isotope gas spectral measuring device to lead out the exhalation in the collecting chambers 1a, 1b. The inner diameters of the nozzles N<sub>1</sub>, N<sub>2</sub> are mutually different and the thicknesses of the pipes 2a, 2b are also mutually different. By this constitution, it is prevented that the pipes 2a, 2b are attached to the nozzles N<sub>1</sub>, N<sub>2</sub> by mistake.

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<p>98-445227/38 B04 D16 MOME= 96.01.17  MOSC MED ACAD *RU 2104535-C1  96.01.17 96RU-101025 (98.02.10) G01N 33/497  <b>Determination of pro-superoxide activity from exhaled air - by incubating with animal tissue in presence of nitro:blue tetrazolium and superoxide dismutase and analysing product(s) spectrophotometrically (Rus)</b>  <b>C98-134972</b>  Addnl. Data: KOGAN A KH, GEPPE N A, ZEZEROV E G</p>	<p>B(4-B4H, 4-B4M, 4-L3, 7-D13, 11-C7B1, 12-K4) D(5-A2A, 5-H9) .6</p> <p>The method may be used in medicine (especially pathophysiology and pulmonology) for, e.g. diagnosing or monitoring the treatment of internal organ diseases, and assessing air quality.</p> <p><b>ADVANTAGE</b>  The method allows various pathological states to be investigated in the living organism.</p>
<p>Determination of prosuperoxide activity of exhaled air from patients or healthy individuals by investigating its effect on biopsy tissue from an animal, is new.</p> <p>The tissue is incubated with nitroblue tetrazolium (I) and superoxide dismutase (II) in the presence of exhaled air samples from the patient and a healthy individual (control). The product from the reaction between the superoxide anion- radical and (I) (especially formazans) is extracted with an organic solvent, followed by spectrophotometric determination of formazan concentration.</p> <p>Prosuperoxide activity of the exhaled air sample is then calculated from the difference between absorbance readings for the patient and control.</p> <p><u>USE</u></p>	<p><b>EXAMPLE</b>  A biopsy sample from a mouse liver (3 mg) was washed, granulated, then incubated for 1 hour with buffer solution (0.3 ml), compound (II) (250 µg in 0.2 ml buffer solution), 3% NADPH (0.1 ml), 0.2% (I) solution (0.2 ml) and exhaled air from a bronchial asthma patient (730 mm Hg).</p> <p>The difference in absorbance readings for this sample (0.196 units) and air from a healthy subject (0.084) represented the prosuperoxide activity of the patient's exhaled air sample. (DB) (4pp2305DwgNo.0/0)</p> <p style="text-align: right;">  RU 2104535-C</p>

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